

## DEPARTMENT OF TRANSPORTATION

**National Highway Traffic Safety Administration** 

[Docket No. NHTSA-2016-0115; Notice 2; Docket No. NHTSA-2016-0138; Notice 2; Docket No. NHTSA-2016-0139; Notice 2]

BMW of North America, LLC; Jaguar Land Rover North America, LLC; and Autoliv, Inc.; Decisions of Petitions for Inconsequential Noncompliance

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

**ACTION:** Decisions of petitions.

SUMMARY: Petitioners BMW of North America, LLC and Jaguar Land Rover North

America, LLC, have each determined that certain seat belt assemblies equipped in certain 20162017 model year vehicles do not fully comply with Federal Motor Vehicle Safety Standard

(FMVSS) No. 208, Occupant Crash Protection, and FMVSS No. 209, Seat Belt Assemblies.

Autoliv, Inc. has determined that certain seat belt assemblies sold as replacement parts for use in certain 2016-2017 model year vehicles do not fully comply with FMVSS No. 209, Seat Belt

Assemblies. The petitioners have requested that NHTSA deem the subject noncompliances inconsequential to motor vehicle safety and based on an agency review and analysis, NHTSA denies the petitioners' request for an inconsequentiality determination. BMW and Jaguar are therefore obligated to provide notification of, and a free remedy for, that noncompliance.

FOR FURTHER INFORMATION CONTACT: You may contact either Mr. Daniel Koblenz, Office of Chief Counsel, Telephone: 202-366-2992, Facsimile: 202-366-3820, or Mr. Jack Chern, Office of Vehicle Safety Compliance, Telephone: 202-366-0661, Facsimile: 202-366-

3081. The mailing address for these officials is: The National Highway Traffic Safety Administration, 1200 New Jersey Avenue S.E., Washington, D.C., 20590.

#### SUPPLEMENTARY INFORMATION:

#### I. Overview

BMW of North America, LLC (BMW) has determined that certain model year (MY) 2016-2017 BMW, Mini, and Rolls-Royce vehicles do not fully comply with paragraph 4.3(j)(2)(ii) of Federal Motor Vehicle Safety Standard (FMVSS) No. 209, Seat Belt Assemblies (49 CFR 571.209) and paragraph 4.1.5.1(a)(3) of FMVSS No. 208, Occupant Crash Protection.

BMW filed a report dated October 13, 2016, pursuant to 49 CFR part 573, Defect and Noncompliance Responsibility and Reports. BMW also petitioned NHTSA on November 4, 2016, for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential as it relates to motor vehicle safety, pursuant to 49 U.S.C. 30118(d) & 30120(h) and 49 CFR Part 556. Notice of receipt of the BMW petition was published, with a 30-day public comment period, on January 18, 2017, in the Federal Register (82 FR 5641). One comment was received. Subsequent to publication of receipt of the petition, BMW has since amended both its 573 report and petition on July 6, 2018.

Petitioner Jaguar Land Rover North America, LLC (Jaguar) has determined that certain MY 2016-2017 Land Rover Range Rover and Land Rover Range Rover Sport vehicles do not fully comply with paragraph 4.3(j)(2)(ii) of FMVSS No. 209 and paragraphs 4.2.6 and 7.1.1.3 of FMVSS No. 208, Occupant Crash Protection. Jaguar filed a report dated December 2, 2016, pursuant to 49 CFR part 573, Defect and Noncompliance Responsibility and Reports. Jaguar also petitioned NHTSA on December 23, 2016, for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is

inconsequential as it relates to motor vehicle safety, pursuant to 49 U.S.C. 30118(d) & 30120(h) and 49 CFR Part 556. Notice of receipt of the Jaguar petition was published, with a 30-day public comment period, on May 12, 2017, in the <u>Federal Register</u> (82 FR 22183). No comments were received. Jaguar amended both its 573 report and petition on June 21, 2018.

Petitioner Autoliv, Inc. (Autoliv) has determined that certain replacement seat belt assemblies sold to BMW and Jaguar for installation in their vehicles do not fully comply with paragraph 4.3(j)(2)(ii) of FMVSS No. 209. Autoliv filed a report dated December 1, 2016, pursuant to 49 CFR part 573, Defect and Noncompliance Responsibility and Reports. Autoliv also petitioned NHTSA on December 23, 2016, for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential as it relates to motor vehicle safety, pursuant to 49 U.S.C. 30118(d) & 30120(h) and 49 CFR Part 556. Notice of receipt of the Autoliv petition was published, with a 30-day public comment period, on May 11, 2017, in the Federal Register (82 FR 22050). No comments were received.

To view these petitions and all supporting documents, you may log onto the Federal Docket Management System (FDMS) website at: <a href="https://www.regulations.gov/">https://www.regulations.gov/</a>. Then follow the online search instructions to locate docket number "NHTSA-2016-0115" for BMW's petition, docket number "NHTSA-2016-0138" for Jaguar's petition, or docket number "NHTSA-2016-0139" for Autoliv's petition.

### II. Vehicles Involved

Approximately 15,630 of the following MY 2016-2017 BMW, Mini, and Rolls-Royce vehicles manufactured between June 29, 2016 and October 10, 2016, are potentially affected:

• 2017 BMW X1 SAV (X1 sDrive28i, X1 xDrive28i)

- 2017 BMW 5 Series Gran Turismo (535i Gran Turismo, 535i xDrive Gran Tursimo,
   550i xDrive Gran Turismo)
- 2016 BMW 5 Series (528i, 528i xDrive, 535i, 535i xDrive, 550i, 550i xDrive, M5)
- 2016 BMW 5 Series (535d, 535d xDrive)
- 2016 Mini Cooper Clubman and Mini Cooper S Clubman
- Mini Hardtop 4-door Cooper and Mini Hardtop 4-door Cooper S
- 2017 Rolls-Royce Ghost

Approximately 16,502 of the following MY 2016-2017 Land Rover vehicles manufactured between May 3, 2016 and October 14, 2016, are potentially affected:

- 2016-2017 Land Rover Range Rover
- 2016-2017 Land Rover Range Rover Sport

Approximately 31,682 Autoliv R230.2 and R200.2 front seat LH10° seat belt assemblies manufactured between May 6, 2016 and October 18, 2016, and sold to BMW and Jaguar are potentially affected.

### **IV. Relevant Regulatory Requirements**

Paragraph S4.1.5.1(a)(3) of FMVSS No. 208 includes the requirements relevant to this petition:

• At each front designated seating position that is an "outboard designated seating position," as that term is defined at 49 CFR 571.3, and at each forward-facing rear designated seating position that is a "rear outboard designated seating position," as that term is defined at paragraph S4.1.4.2(c) of FMVSS No. 208, have a Type 2 seat belt assembly that conforms to Standard No. 209 and paragraphs S7.1 through S7.3 of FMVSS No. 208, and, in the case of the Type 2 seat belt assemblies installed at the front outboard designated seating positions, meet the frontal crash protection

requirements with the appropriate anthropomorphic test dummy restrained by the Type 2 seat belt assembly in addition to the means that requires no action by the vehicle occupant.

Paragraph S4.2.6 of FMVSS No. 208 includes the requirements relevant to this petition:

• Trucks, buses, and multipurpose passenger vehicles with a GVWR of 8,500 pounds or less and a unloaded vehicle weight of 5,500 pounds or less manufactured on or after September 1, 1997, shall comply with the requirements of paragraph S4.1.5.1 of this standard (as specified for passenger cars), except that walk-in van-type trucks and vehicles designed to be sold exclusively to the U.S. Postal Service may meet the requirements of paragraphs S4.2.1.1 and S4.2.1.2 of FMVSS No. 208 instead of the requirements of paragraph S4.1.5.1.

Paragraph S7.1.1.3 of FMVSS No. 208 includes the requirements relevant to this petition:

• A Type 1 lap belt or the lap belt portion of any Type 2 seat belt assembly installed at any forward-facing outboard designated seating position of a vehicle with a gross vehicle weight rating of 10,000 pounds or less, to comply with a requirement of this standard, shall meet the requirements of S7.1 by means of an emergency locking retractor that conforms to Standard No. 209.

Paragraph S4.3(j)(2)(ii) of FMVSS No. 209 includes the requirements relevant to this petition:

• For seat belt assemblies manufactured on or after February 22, 2007 and for manufacturers opting for early compliance. An emergency-locking retractor of a Type 1 or Type 2 seat belt assembly, when tested in accordance with the procedures specified in paragraph S5.2(j)(2), shall lock before the webbing payout exceeds the maximum limit of 25 mm when the retractor is subjected to an acceleration of 0.7 g

under the applicable test conditions of S5.2(j)(2)(iii)(A) or (B). The retractor is determined to be locked when the webbing belt load tension is at least 35 N.

### III. Noncompliance

The petitioners<sup>1</sup> explain that the subject noncompliance involves the Emergency Locking Retractor (ELR) in the seat belt assembly of the affected vehicles' front left seats. The petitioners report that these vehicle-sensitive ELRs do not lock as required when subjected to the conditions set out in S4.3(j)(2)(ii) of FMVSS No. 209. Specifically, when subjected to an acceleration of 0.7 g, the ELR shall lock before the webbing payout exceeds the maximum limit of 25 mm. However, the ELRs on affected vehicles lock up after paying out 90 mm of webbing, which is 3.6 times of the permitted maximum payout of 25 mm. The affected ELRs will lock at the permitted 25 mm payout when subjected to an acceleration of 1.0 g.

This noncompliance with the ELR locking requirements of FMVSS No. 209 is also a noncompliance with FMVSS No. 208 because S7.1.1.3 of FMVSS No. 208 requires that all forward-facing outboard designated seating positions be equipped with an FMVSS No. 209-compliant seat belt assembly.

# V. Background

An ELR is a component of a seat belt assembly that is intended to protect vehicle occupants against injury or death by limiting how much webbing the assembly's retractor pays out when a belted occupant is subjected to rapid deceleration, as would happen during panic braking or a crash. ELRs do this by locking the webbing spool and restraining an occupant's travel distance before the occupant strikes the vehicle's interior structure.

<sup>&</sup>lt;sup>1</sup> BMW, Jaguar, and Autoliv filed separate petitions with the agency as described above. Due to the similarity of the issues addressed by the petitions, the agency is addressing them all together in this notice.

There are two basic types of ELR: vehicle-sensitive and webbing-sensitive. In a vehiclesensitive ELR, the locking mechanism activates when it senses rapid deceleration of the vehicle itself. In a webbing-sensitive ELR, the locking mechanism activates when the webbing payout rate from the retractor exceeds a predetermined threshold. In many cases, vehicle manufacturers voluntarily equip their vehicles with both vehicle-sensitive and webbing-sensitive ELRs, as the two types of locking mechanisms behave differently and have their own advantages and disadvantages.

ELRs on new vehicles are primarily regulated by FMVSS Nos. 208 and 209. These two standards measure ELR performance in different ways. FMVSS No. 208 is a vehicle-level standard that establishes requirements for how the entire vehicle (including ELRs) must perform in a set number of dynamic frontal crash test scenarios. FMVSS No. 208 requires that the forces and accelerations that an anthropomorphic test device experiences during these dynamic crash tests (collectively "injury assessment reference values" or "IARVs") do not exceed a specified value. FMVSS No. 208 also requires that vehicles be equipped with certain active and passive restraint systems, including the requirement that all forward-facing outboard designated seating positions in vehicles with a gross vehicle weight rating of 10,000 pounds or less be equipped with ELRs meeting the requirements of FMVSS No. 209.<sup>2</sup>

Unlike FMVSS No. 208, FMVSS No. 209 is an equipment-level standard which sets out minimum performance requirements for seat belt assemblies and their individual components. These include static testing requirements like a requirement that components of the seat belt assembly can withstand certain loads and that its components do not degrade when exposed to different types of wear.<sup>3</sup> The requirements that apply specifically to ELRs are set out in FMVSS

<sup>&</sup>lt;sup>2</sup> FMVSS No. 208 S7.1.1.3 <sup>3</sup> FMVSS No. 209, S4.2

No. 209 S4.3(j), and the requirement that an ELR lock before the webbing extends 25 mm when the retractor is subjected to an acceleration of 0.7 g is set out at S4.3(j)(2)(ii).

# VI. Summary of Petitions

According to the petitioners, the affected vehicles and equipment do not comply with paragraph S4.3(j)(2)(ii) of FMVSS No. 209. By extension, the affected vehicles also do not comply with aspects of FMVSS No. 208 that require seat belt assemblies conforming to FMVSS No. 209 be installed in vehicles.<sup>4</sup> As explained above, FMVSS No. 209, S4.3(j)(2)(ii) requires that ELRs lock within 25 mm of webbing payout when tested at an acceleration of 0.7 g under the procedures specified in S5.2(j)(2)(iii)(A) or (B). According to the petitioners, the ELRs payout more webbing than is permitted under the standard at the specified acceleration of 0.7 g, but that the payout decreases at higher accelerations. Specifically, the affected ELRs payout 90 mm of webbing before locking when tested with an acceleration of 0.7 g, and they payout the required 25 mm of webbing before locking when tested with an acceleration of 1.0 g.

The petitioners stated their belief that the noncompliance is inconsequential as it relates to motor vehicle safety. In support, the petitioners submitted the following arguments:

- a) The vehicle-sensitive locking mechanism functions, but the noncompliance involves what the petitioners assert is a "slight" exceedance of the FMVSS No. 209 Section S4.3(j)(2)(ii) requirement.
- b) The affected vehicles' seat belt assemblies also contain a voluntary webbing-sensitive locking mechanism which provides crash and rollover restraint performance

<sup>&</sup>lt;sup>4</sup> BMW amended their Part 573 and their petition to address the noncompliance with FMVSS No. 208, S4.1.5.1(a)(3) since their petition applied to passenger vehicles. Jaguar acknowledged a noncompliance with FMVSS No. 208, S7.1.1.3, however, they also amended their Part 573 report and their petition to include a noncompliance with FMVSS No. 208, S4.2.6 since their petition applied to light trucks, buses, or multipurpose passenger vehicles applicable to this requirement.

- comparable to the performance provided by an FMVSS No. 209 compliant vehiclesensitive locking mechanism.
- c) Crash test results comparing FMVSS No. 209 S4.3(j)(2)(ii) compliant ELRs and ELRs in which the vehicle-sensitive locking mechanism has been disabled (to demonstrate a "worst-case scenario", even though in affected vehicles the vehicle-sensitive mechanism remains functional) demonstrate comparable results according to dynamic test assessments. According to the petitioners, the test results indicate that any performance differences between a compliant and noncompliant vehicle-sensitive ELR are within normal "data scatter" and can be attributed to test tolerances.<sup>5</sup>
- d) Affected seat belt assemblies comply with all other applicable provisions of FMVSS No. 209. (BMW specifically points out that the tilt-lock function of the ELRs on its vehicles are compliant with FMVSS No. 209, since it locks at angles greater than 15-deg up to 41-deg when subjected to the FMVSS No. 209 Section S4.3(j)(2) rollover requirements.)
- e) NHTSA previously granted a petition from General Motors in which the ELR's vehicle-sensitive locking mechanism was completely non-functional, whereas the ELR's vehicle-sensitive locking mechanism in the affected BMW vehicles is

<sup>&</sup>lt;sup>5</sup> The petitioners performed sled tests and "quasi-static" rollover tests in which they compared the performance of vehicles with compliant and noncompliant vehicle-sensitive ELRs in a crash. In addition, Jaguar submitted data from a run of a simulated "cork-screw" rollover test using computer modelling. The petitioners argue that the results of these tests support a finding that the subject noncompliance is inconsequential because there was no significant difference in performance between compliant and disabled vehicle-sensitive ELRs, both for tests that measured occupant movement during a crash and tests that measured IARVs in a crash.

<sup>&</sup>lt;sup>6</sup> See 69 FR 19897 (Apr. 14, 2004). The agency's view on this issue has evolved since that decision. The agency granted in part that petition as to certain vehicles because it found, based on the facts and circumstances presented, that there was not a significant likelihood of increased injury due to the absence of a complying ELR. See id. at 19900-01. For the reasons described below in the agency's response to petitioners' arguments, NHTSA has concluded here that the absence of a complying ELR would impose risks to motor vehicle safety.

functional, but may experience a "slight" exceedance of the FMVSS No. 209 S4.3(j)(2)(ii) requirement.

- f) The petitioners have not received any customer complaints related to this issue.
- g) The petitioners are not aware of any accidents or injuries related to this issue.
- h) Both BMW and Jaguar have corrected vehicle production and Autoliv has corrected production of the seat belt assemblies.

On these bases, the petitioners stated their belief that the subject noncompliances are inconsequential as they relate to motor vehicle safety, and that their petitions to be exempted from providing notification of the noncompliance, as required by 49 U.S.C. 30118, and a remedy for the noncompliances, as required by 49 U.S.C. 30120, should be granted.

To view the petitions and accompanying test data and analyses, you can visit https://www.regulations.gov by following the online instructions for accessing the dockets and by using the docket ID number for this petition shown in the heading of this notice.

#### **VII. Public Comments**

NHTSA received one comment concerning BMW's petition, from Mr. Brian Birchler.

Mr. Birchler was of the opinion that NHTSA should grant BMW's request on the basis that a prior petition, similar in nature, was partially granted. NHTSA appreciates Mr. Birchler's input, however, for the reasons described below, NHTSA disagrees with his recommendation.

NHTSA did not receive any comments on either Jaguar's or Autoliv's petitions.

## VIII. NHTSA's Analysis

### A. General Principles

Congress passed the National Traffic and Motor Vehicle Safety Act of 1966 (the "Safety Act") with the express purpose of reducing motor vehicle accidents, deaths, injuries, and

property damage. 49 U.S.C. 30101. To this end, the Safety Act empowers the Secretary of Transportation to establish and enforce mandatory Federal Motor Vehicle Safety Standards (FMVSS). 49 U.S.C. 30111. The Secretary has delegated this authority to NHTSA. 49 CFR 1.95.

NHTSA adopts an FMVSS only after the agency has determined that the performance requirements are objective and practicable and meet the need for motor vehicle safety. See 49 U.S.C. 30111(a). Thus, there is a general presumption that the failure of a motor vehicle or item of motor vehicle equipment to comply with an FMVSS increases the risk to motor vehicle safety beyond the level deemed appropriate by NHTSA through the rulemaking process. To protect the public from such risks, manufacturers whose products fail to comply with an FMVSS are normally required to conduct a safety recall under which they must notify owners, purchasers, and dealers of the noncompliance and provide a free remedy. 49 U.S.C. 30118–30120. However, Congress has recognized that, under some limited circumstances, a noncompliance could be "inconsequential" to motor vehicle safety. It therefore established a procedure under which NHTSA may consider whether it is appropriate to exempt a manufacturer from its notification and remedy (i.e., recall) obligations. 49 U.S.C. 30118(d) & 30120(h). The agency's regulations governing the filing and consideration of petitions for inconsequentiality exemptions are set out at 49 CFR Part 556.

Under the Safety Act and Part 556, inconsequentiality exemptions may be granted only in response to a petition from a manufacturer, and then only after notice in the Federal Register and an opportunity for interested members of the public to present information, views, and arguments on the petition. In addition to considering public comments, the agency will draw upon its own understanding of safety-related systems and its experience in deciding the merits of a petition.

An absence of opposing argument and data from the public does not require NHTSA to grant a manufacturer's petition.

Neither the Safety Act nor Part 556 define the term "inconsequential." Rather, the agency determines whether a particular noncompliance is inconsequential to motor vehicle safety based upon the specific facts before it in a particular petition. In some instances, NHTSA has determined that a manufacturer met its burden of demonstrating that a noncompliance is inconsequential to safety. For example, a label intended to provide safety advice to an owner or occupant may have a misspelled word, or it may be printed in the wrong format or the wrong type size. Where a manufacturer has shown that the discrepancy with the safety requirement is unlikely to lead to any misunderstanding, NHTSA has granted an inconsequentiality exemption, especially where other sources of correct information are available. See, e.g., General Motors, LLC., Grant of Petition for Decision of Inconsequential Noncompliance, 81 FR 92963 (Dec. 20, 2016).

Where the subject noncompliance involves a failure to comply with a performance requirement or standard, petitioners have a greater burden to show that the noncompliance is inconsequential due to the direct effects of such a noncompliance on vehicle safety.

Accordingly, the agency has found few such noncompliances to be inconsequential. One area in which the agency has granted such petitions has been where the noncompliance is expected to be imperceptible, or nearly so, to vehicle occupants or approaching drivers. For example, in one case, NHTSA determined that the use of an improper upper beam filament that results in a luminous flux 4% below the lower limit, but which still passes photometry requirements, was an inconsequential noncompliance with FMVSS No. 108, Lamps, Reflective Devices, and

Associated Equipment. See Osram Sylvania Products Incorporate, Grant of Petition for Decision

of Inconsequential Noncompliance, 78 FR 46000 (July 30, 2013) (NHTSA-2012-0008; Notice 2).

Arguments that only a small number of vehicles or items of motor vehicle equipment are affected by a noncompliance will not justify granting an inconsequentiality petition. Similarly, NHTSA has rejected petitions based on the assertion that only a small percentage of the vehicles or items of equipment covered by a noncompliance determination are likely to actually exhibit the noncompliance. In many such cases, it may not be readily apparent which vehicles or items of equipment are actually noncompliant. More importantly, however, the key issue in determining inconsequentiality is not the aggregate safety consequences of the noncompliance as a percentage of all drivers, but instead, whether the noncompliance in question is likely to increase the safety risk to individual occupants. See Cosco, Inc., Denial of Application for Decision of Inconsequential Noncompliance, 64 FR 29408 (June 1, 1999) (NHTSA–98–4033–2); General Motors Corporation, Ruling on Petition for Determination of Inconsequential Noncompliance, 69 FR 19897 (April 14, 2004) (NHTSA–2002–12366, Notice 2).

# B. Response to BMW and Jaguar's Arguments

NHTSA has considered the petitioners' arguments and determined that the subject noncompliance is not inconsequential. NHTSA therefore denies the petitioners' request for an inconsequentiality determination. We respond to the petitioners' arguments below.

## The magnitude of the noncompliance is small

The petitioners first argue that the vehicle-sensitive locking mechanism is functional, and that the magnitude of the affected vehicles' noncompliance with S4.3(j)(2)(ii) is minor and therefore inconsequential to motor vehicle safety. NHTSA rejects both the suggestion that the subject noncompliance is small, and that it is inconsequential to motor vehicle safety.

As previously noted, S4.3(j)(2)(ii) of FMVSS No. 209 requires that ELRs lock within 25 mm of webbing payout when tested at an acceleration of 0.7 g. The petitioners state that the noncompliant ELRs on affected vehicles lock within 90 mm when tested at the required 0.7 g. Put another way, the webbing payout of the affected noncompliant ELRs exceeds the 25 mm locking requirement by approximately 3.6 times. This noncompliance is hardly "slight," and in fact, was detectable through routine braking tests. Performance failures of safety-critical equipment, like seat belts, should rarely, if ever, be granted as inconsequential, and it seems clear that the subject noncompliance falls well outside of the bounds of inconsequentiality.

The petitioners' assertion that the subject noncompliance is inconsequential because the retractor performs as required when tested at 1.0 g does not assuage our concerns regarding the magnitude of the noncompliance. According to the petitioners, the noncompliant retractors lock at the required distance of 25 mm when experiencing a 1.0 g acceleration—the approximate minimum level of acceleration that an occupant would experience in a frontal crash. This argument ignores the fact that retractors are intended to protect occupants not just in a crash setting, but also during pre-crash (panic) braking.<sup>7</sup> In many of these pre-crash situations, the retractor might experience an acceleration of between 0.7 g and 1.0 g. If the retractor fails to lock when it experiences these lower g-forces, it would negatively impact motor vehicle safety by increasing both the likelihood and severity of injuries from a crash.

Our concern with pre-crash panic braking is reflected in the regulatory history of FMVSS No. 209. In the NPRM that preceded NHTSA's adoption of a 0.7 g locking threshold, NHTSA

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<sup>&</sup>lt;sup>7</sup> We note that for some of the petitioners' sled testing, they positioned the test dummies in a way that they claim simulates pre-crash braking. Positioning the dummies in this way does not address the underlying issue, which is that an ELR with a locking threshold of 1.0 g will not lock up during pre-crash braking, which could cause the driver to lose control or be out of position at the time of a crash.

had originally proposed a locking threshold of 2.0 g.8 In response to the NPRM proposing a locking threshold of 2.0 g, commenters contended that 2.0 g was too high a threshold because ELRs should optimally lock during both crashes and pre-crash panic braking. Commenters noted that, because panic braking causes deceleration forces of less than 1.0 g, the ELR would not lock during panic braking if the locking threshold were set to 2.0 g. In response to these commenters and other data NHTSA received suggesting that a 2.0 g threshold was too high, NHTSA reduced the locking threshold in the final rule to 0.7 g.9 This requirement is still in effect today.

NHTSA restated its concern with pre-crash braking in an August 22, 2005 Final Rule addressing a petition submitted by the Automotive Occupant Restraints Council (AORC) in which the agency proposed a new acceleration corridor with an increased maximum onset rate. 10 NHTSA explained in that final rule that it is essential to ensure seat belt assemblies perform their important safety function of locking up a seat belt in the event of a crash or emergency braking, and that the proposed corridor was sufficiently wide as to allow a range of onset rates to be tested that were preliminarily determined to be more representative of both real-world crashes and emergency braking events.

# Comparable performance of compliant and noncompliant ELRs

The petitioners next argue that the subject noncompliance is inconsequential because an occupant of a representative vehicle equipped with a disabled vehicle-sensitive ELR experiences comparable occupant displacement and IARVs as an occupant of the same vehicle equipped with

 <sup>8 35</sup> FR 4641 (March 17, 1970)
 9 36 FR 4607 (March 10, 1971)

<sup>&</sup>lt;sup>10</sup> 70 FR 48883, 48885 (August 22, 2005)

compliant vehicle-sensitive ELR when involved in a crash.<sup>11</sup> The petitioners' support this argument with data from a series of sled tests and rollover tests which is summarized in the petitions. All of the tests that the petitioners submitted involve a side-by-side comparison of two seat belt assemblies: one with a disabled vehicle-sensitive ELR and the other with a compliant vehicle-sensitive ELR. The petitioners claim that the data collected from these tests show that during crash scenarios, an occupant secured in a seating position with a compliant vehicle-sensitive ELR will experience forces comparable to a dummy in a seating position that is equipped with a disabled vehicle-sensitive ELR.<sup>12</sup> The petitioners argue that this comparable performance demonstrates that the noncompliance is inconsequential.

We disagree with the petitioners' assessment because it ignores the crucial role that the static testing requirements of FMVSS No. 209 play as a safety backstop for crash scenarios that are not accounted for in dynamic tests such as those performed by the petitioners. Dynamic tests are meant to assess whether a vehicle's occupant protection systems work cohesively in certain representative crashes. However, there are countless crash and pre-crash scenarios that these sorts of tests do not cover, which is why static requirements of FMVSS No. 209 are intended to "fill in the gaps" to ensure that the vehicle's seat belt equipment maintains a minimum level of performance in untested scenarios.

For example, dynamic tests do not account for the fact that a seat belt assembly is intended to protect occupants even when they are out of position. This issue was highlighted by one anomalous result of one of BMW's sled tests, in which the results showed an elevated IARV metric for the left femur of a dummy in a seat with a disabled vehicle-sensitive ELR. BMW

<sup>11</sup> The petitioners' argument here is premised on a similar argument made by General Motors in an inconsequentiality petition in 2002, which we partially granted. 69 FR 19897 (April 14, 2004). As stated above and for the reasons explained in this notice, the agency's view on this issue has evolved.

<sup>&</sup>lt;sup>12</sup> The petitioners attribute the similar performance to the fact that both seat belt assemblies were equipped with an optional webbing-sensitive ELR. This webbing-sensitive ELR is also not compliant with FMVSS No. 209.

explains that this result could be attributed to a "non-optimum positioning of the test dummy's knee relative to the knee air bag." While we take no view as to whether this elevated injury metric was due to "non-optimum positioning" of the dummy, the fact that non-optimum positioning can occur—even in a controlled testing environment—underscores the need to protect occupants to the greatest extent possible in all positions, including those not typically dynamically tested.

FMVSS No. 209's role as a safety backstop that complements (rather than substitutes for) dynamic testing requirements is also apparent from NHTSA's hesitance to create exemptions from static requirements of FMVSS No. 209 that are based on a vehicle's compliance with other dynamic testing requirements.<sup>13</sup> In the decades that FMVSS No. 209 has existed, NHTSA has seldom amended the standard to permit such an exemption. One exception was when the agency adopted S4.5 of FMVSS No. 209. S4.5 exempts seat belt assemblies from the elongation requirements of S4.2(c), S4.4(a)(2), S4.4(b)(4), or S4.4(b)(5), if those seat belt assemblies are (1) equipped with load limiters, and (2) are installed at designated seating positions subject to the requirements of S5.1 of FMVSS No. 208 (i.e., in seating positions with frontal air bags).

NHTSA established S4.5 only after it determined through extensive research that this change would have a net benefit on vehicle safety. Prior to adopting this change, the agency found that both static and dynamic testing requirements were needed to ensure occupant safety because the safety contribution of seat belts assemblies and individual components in a crash can be affected by the presence of other occupant protection equipment, and that the level of occupant protection that the seat belt assembly afforded depended on the performance of the

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<sup>&</sup>lt;sup>13</sup> Dynamic testing in this context consists of a 30 mile per hour crash test of the vehicle using test dummies as surrogates for human occupants in contrast to laboratory tests of the seat belt assembly.

safety belts themselves and the structural characteristics and interior design of the vehicle.<sup>14</sup> The agency has not conducted research into the potential safety impacts of a similar exemption for the requirement in FMVSS No. 209, S4.3(j)(2)(ii), and has no reason to believe that such a change would have anything but a negative effect on vehicle safety.

## Remaining Arguments

The petitioners also raise four additional points in support of their petitions: (1) that the affected safety belt assemblies comply with all other applicable provisions of FMVSS No. 209; (2) that they have not received any customer complaints related to the subject noncompliance; (3) that they are not aware of any accidents or injuries related to the subject noncompliance; and (4) that they have corrected the issue in new vehicle production. NHTSA has considered these arguments and determined that they should not factor into our inconsequentiality analysis.

First, the fact that the seat belt assemblies comply with all other requirements of FMVSS No. 209 does not affect whether the subject noncompliance was inconsequential. All vehicles are required to comply with all applicable FMVSSs in effect at the time of manufacture, which means that a vehicle's compliance with some requirements cannot offset a vehicle's noncompliance with other requirements.

Second, the fact that the petitioners have stated that they received no complaints or do not know of injuries related to the noncompliance does not inform the agency's analysis. Even a consequential noncompliance may result in very few complaints and/or injury reports because drivers may not realize that the noncompliance exists. For example, in this case, it is unlikely that customers would run their own tests to measure ELR performance, and it is unlikely that they would notice the retractor's failure to lock after paying out 25 mm of webbing at an acceleration of 0.7 g unless they already knew about the noncompliance. Moreover, in the event

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<sup>&</sup>lt;sup>14</sup> 56 FR 15295 (April 16, 1991).

of a crash, it would be very difficult for investigators to link crash-related injury specifically to the subject noncompliance, especially if the noncompliance only played an indirect role in causing the injury (such as by failing to restrain a driver in pre-crash braking, causing the driver to lose control of the vehicle). Lastly, given the size and age of the affected vehicle population, it is possible the noncompliance simply has not yet led to complaints or injuries, even if it is likely to in the future.

Finally, the fact that new vehicle production has been corrected does not factor into our analysis of whether the noncompliance is inconsequential. The manufacturers were legally obligated to correct new vehicle production. *See* 49 U.S.C. 30112(a); 30115(a). A manufacturer cannot certify or manufacture for sale a vehicle it knows to be noncompliant. *Id.* The fact that new vehicle production has been corrected simply informs us that the noncompliance is limited to the affected vehicles described in the petitions. As we noted earlier, the fact that only a small number of vehicles are affected by a noncompliance will not justify our granting an inconsequentiality petition.

#### IX. NHTSA's Decision

In consideration of the foregoing, NHTSA finds that BMW and Jaguar have not met their burden of persuading the agency that the subject noncompliances with FMVSS Nos. 208 and 209 are inconsequential to motor vehicle safety. Accordingly, NHTSA hereby denies the petitions submitted by BMW and Jaguar. BMW and Jaguar are therefore obligated to provide notification of, and a free remedy for, that noncompliance in accordance with 49 U.S.C. 30118 through 30120.

NHTSA has reviewed Autoliv's petition and based on an e-mail dated February 28, 2017, Autoliv states that while they do sell a relatively small quantity of replacement parts to Autoliv

operations in Europe, they do not sell directly to dealerships or the aftermarket. Autoliv says that

all of their sales are direct to the OEM's who in turn, manage the distribution of those parts to

their dealer networks. Thus, Autoliv has no standing to file for an exemption in accordance with

49 CFR 556, in this case, and therefore, Autoliv's petition is hereby moot.

**Authority:** (49 U.S.C. 30118, 30120: delegations of authority at 49 CFR 1.95 and 501.8)

Jeffrey Mark Giuseppe,

Associate Administrator for Enforcement.

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